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EXAMINER

HOPKINS, CHRISTINE D

ART UNIT PAPER NUMBER

3735

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/522,033

Applicant(s)

ANNINO ET AL.

Examiner

Christine D. Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 21 Jan 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. The claims include reference characters which are enclosed within parentheses. The use of reference characters is considered as having no effect on the scope of the claims. Since the reference characters are not afforded patentable weight, the reference characters enclosed within parentheses apparently should be deleted from the claims. Correction is requested.

Claim Objections

2. The claims are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

3. Claim 1 is objected to because of the following informalities: at line 3 of claim 1, "using the multi channel biomagnetometer said electronic device" should apparently read --using the multi channel biomagnetometer, said electronic device--. At lines 4 and 5 of claim 2, "so that to cover completely" should apparently read --so as to cover completely--. Appropriate correction is required.

4. Claim 8 is objected to because of the following informalities: at line 6, "connecting in parallel said programmable circuit" should apparently read -- connecting in parallel with said programmable circuit--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. As such, an art rejection is given as best can be understood by the Examiner.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 at line 1 recites the limitation "the electronic device." At line 3, claim 1 further recites the limitation "the multi channel biomagnetometer." There is insufficient antecedent basis for these limitations in the claim. Claim 1 at line 3 recites "a great number of coils." It is unclear as to what number constitutes a "great number of coils". At line 10, the claim further recites "a number of resistors and capacitors." It is unclear as to what number constitutes a "number of resistors and capacitors." At line 7, the limitations "the data" given by "the computer" lack insufficient antecedent basis for these limitations in the claim.

Claim 2 at line 2 recites "a good conductive metal." It is unclear as to what Applicant regards as a "good conductive metal." Claim 2 recites the limitation "said five groups" and "five specific regions" at lines 2 and 4, respectively. There is insufficient

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antecedent basis for these limitations in the claim. At line 3, it is unclear as to what constitutes "a special hemispherical arrangement" or a "inside in specific helmet." Furthermore, it is unclear whether the coils are in a special hemispherical arrangement inside a helmet or on a flexible plastic plate. At lines 7-10, "the body," "the end," "the other common end," and "the ground" lack sufficient antecedent basis for these limitations in the claim.

Claim 3 at line 1 recites the limitation "the produced magnetic fields." There is insufficient antecedent basis for this limitation in the claim. At line 2, it is unclear as to what constitutes a "mostly" square wave signal. Claim 3 at line 3 recites the limitation "the first decimal digit." Claim 3 at line 4 recites the limitation "the blood plasma." Line 5 recites the limitation "the magnetic lines." Claim 3 at line 6 recites the limitation "the foreign substances." There is insufficient antecedent basis for these limitations in the claim.

Claim 4 at line 3 recites "a great number of coils." It is unclear as to what number constitutes a "great number of coils."

Claim 5 at line 2 recites the limitation "the data given by said keyboard or programmable circuit." Claim 5 at line 5 recites the limitation "the regular function of the device." There is insufficient antecedent basis for these limitations in the claim.

Claim 6 at line 2 recites the limitation "with the ability to accept data." There is insufficient antecedent basis for these limitations in the claim. At line 3, it is unclear as to what constitutes an "appropriate program."

Claim 7 at line 2 recites the limitations "the characteristics parameters of the magnetic fields." Claim 7 at line 3 recites the limitation "the potential." Claim 7 at line 5 recites the limitation "the time operation crystal" and "the timing frequencies of the system." Claim 7 at line 6 recites the limitation "the intensity of the alternating current." Claim 7 at line 9 recites the limitation "the batteries." Claim 7 at line 8 recites the limitation "the total Voltage." There is insufficient antecedent basis for these limitations in the claim.

Claim 8 at line 3 recites the limitation "the good function of the device." There is insufficient antecedent basis for this limitation in the claim. At line 4 of claim 8, it is unclear as to which resistor recited in claim 1 is the "resistance" of reference in claim 8. Claim 8 at line 5 recites the limitation "the electric source." There is insufficient antecedent basis for this limitation in the claim.

Regarding claims 7 and 8, when the reference characters are not considered it is unclear whether the common elements to both claims are the same elements or separate, additional elements.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Rauscher et al. (U.S. Patent No. 4,889,526). Rauscher et al. (hereinafter Rauscher) teaches an invention that generates a time-varying magnetic field to stimulate the nervous system in an effort to reduce pain in humans. Regarding claims 1 and 5, Rauscher discloses a "number of coils," an "alternating current output" or voltage regulator **24**, a "microcontroller" or square wave generator **26** that causes current to flow through a "programmable circuit" and regulates the magnetic fields (col. 29, lines 64-68). A "computer," or magnetic detector, receives data through a "serial port" and circuit chip providing a connection to the coils. The computer can further display data on a spectrum analyzer display, or "interface display" (col. 32, lines 11-17). Individual settings of adjustment of the frequencies thus define a "keyboard" (col. 31, lines 53-68). Two potentiometers, a "number of resistors" and capacitors, and a timing switch **108** regulate the operating time. A battery is supplied for power. Since the disclosure of the instant application does not explicitly state the function of a "LED," the phono jack **106**, used in the event of a rechargeable battery, will be construed as such (col. 30, lines 53-68 and col. 31, lines 1-15).

Regarding claim 2, and in light of the indefinite nature of the claim, the coils as taught by Rauscher, constructed of a mu-metal material and of a cylindrical or "spiral plane form," are arranged in groups (see Fig. 5) and capable of being placed over specific regions of the skull (col. 30, lines 33-38). The "end" of the coils may be connected in parallel or series (col. 30, lines 48-52) with the "alternating current output" **104** through resistors, and connected to ground (see Fig. 12).

Referring to claims 3 and 4, the device as taught by Rauscher produces magnetic fields of alternating positive symmetrical waves with low frequencies from about 7.15 to about 7.78 Hz (col. 2, lines 19-23), which are capable of being regulated to a first decimal point. The "alternating current output" **104** supplies a "number of coils" (see Fig. 12).

Regarding claim 6, the "microcontroller," or square wave generator **26**, is capable of receiving data given by the "computer," or magnetic detector, for frequency programming through the serial port with the "appropriate program" (construed as that frequency chosen by the user) and integrated circuit to produce the magnetic fields (col. 29, lines 64-68 and col. 31, lines 53-68).

With respect to claim 7, Rauscher teaches an interface, or spectrum analyzer display, construed as an LCD for indicating characteristics of the magnetic fields, a potentiometer for adjusting frequencies (col. 32, lines 11-17), resistors, including a variable resistor to increase potential, capacitors, timer chips and "rotary switch" **108** for timing frequencies and regulation of the magnetic field (see Fig. 12 and col. 30, lines 53-68 and col. 31, lines 1-52). It further includes a battery **102**, and in view of the indefinite nature of the claim, a voltage regulator to drop the voltage. Since the disclosure of the instant application does not explicitly state the function of a "LED," the phono jack **106**, used in the event of a rechargeable battery, will be construed as such (col. 30, lines 53-68 and col. 31, lines 1-15).

Regarding claim 8, in and in view of the lack of clarity associated with the claim, Rauscher teaches a serial port and integrated circuit to produce the magnetic fields and

connect the "computer," or magnetic detector (col. 29, lines 64-68 and col. 31, lines 53-68) with the microcontroller **26**, which controls function of the waves produced; a rotary switch **108** and resistors with an end connected to ground and an end connected to the battery, or electric source. A potentiometer is connected with the rotary switch **108**, "programmable circuit" and the microcontroller **26** (see Fig. 12).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,453,072 to Anninos et al. discloses an electronic device for use in conjunction with a biomagnetometer for treating the nervous system.

U.S. Patent No. 5,496,258 to Anninos et al. discloses a device for treating epileptic seizures by way of a magnetic field.

U.S. Patent No. 6,527,697 to Bashford et al. discloses a therapeutic device for alleviating health-related disorders by applying a magnetic field to a patient.

U.S. Patent No. 4,428,366 to Findl et al. discloses an apparatus for controlling the glucose levels in an animal by applying a pulsed magnetic field to opposite sides of the animal.

U.S. Patent No. 5,444,373 to Johnson et al. discloses a biomagnetometer for collecting magnetic data produced by a living organism.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine D. Hopkins whose telephone number is (571) 272-9058. The examiner can normally be reached on Monday-Friday, 7 a.m.-3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christine D Hopkins
Examiner
Art Unit 3735



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